

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WALEED ALMULLA

Appeal No. 1998-0692
Application 08/693,551

ON BRIEF

Before HAIRSTON, KRASS, and DIXON, Administrative Patent
Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of
claims 4 through 13, all of the claims remaining in the
application.

The invention pertains to the improvement in power

consumption of an electrical component while maintaining high operating frequency. More particularly, critical signal paths that require a higher voltage in order to operate below a maximum propagation delay in order to maintain the operating frequency of the device are separated out and operated at the higher voltage while the remaining devices which do not require the higher voltage to have signal paths operate below the maximum propagation delay are operated at a lower power supply to minimize overall power consumption of the component.

Representative independent claim 4 is reproduced as follows:

4. An electrical component comprising a plurality of devices which are powered by a plurality of voltages, said devices arranged in signal paths, said signal paths including critical signal paths wherein during operation of the component a signal must propagate through the critical signal paths within a maximum propagation delay required to maintain the operating frequency of the component, said component operating with a minimum amount of power consumption, said component comprising:

a first portion of the component having only first voltage signal paths of devices which operate below the maximum propagation delay when the devices are operated at a first voltage said first portion operating using low power consumption;

a second portion of the component having only second voltage signal paths of devices which do not operate below the maximum propagation delay when the devices in the signal paths are operated at the first voltage, the devices of the second

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portion of the component operated at a second higher voltage thereby decreasing the propagation delay through the signal paths; and

switches coupling certain signal paths from the first portion and second portion of the component which propagate the signal between the first voltage signal paths and higher second voltage signal paths.

The examiner relies on the following reference:

Gregor	5,084,637	Jan. 28, 1992
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Claims 4, 7 through 9, 12 and 13 stand rejected under 35 U.S.C. § 102(b) as anticipated by Gregor. Claims 5, 6, 10 and 11 stand rejected under 35 U.S.C. § 103 as unpatentable over Gregor.

Reference is made to the briefs and answer for the respective positions of appellant and the examiner.

OPINION

We reverse.

The examiner identifies, in Gregor, a first voltage supply source, V_{DDL} , a second voltage supply source, V_{DDH} , a first circuit portion, 22 and 23, and a second circuit portion, 19 and 20, as well as a signal level switch, 10. Independent claim 4 requires that signal paths include "critical signal paths" through which signals must propagate

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"within a maximum propagation delay" and that the first portion of a component has only first voltage signal paths of devices "which operate below the maximum propagation delay" when the devices are operated at a first voltage while a second portion of the component has only second voltage signal paths of devices which "do not operate below the maximum propagation delay" when the devices in the signal paths are operated at the first voltage, wherein devices of the second portion of the component are operated at a second, higher voltage, decreasing the propagation delay through the signal paths. Independent claim 9 has similar recitations.

Gregor says nothing about a "maximum propagation delay" or about various portions of components operating at voltages which affect propagation delays, as claimed. Gregor's only concern about propagation delays is that the interface circuit described therein introduces "minimal propagation delay" [column 2, lines 9-11].

The examiner's treatment of these specific claim limitations is to contend that "since elements 19 and 20 receive a higher supply voltage, they will inherently operate above a 'maximum propagation delay.'" The 'maximum propagation

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delay' being chosen to be slightly above the propagation delay of the 'first portion' when it receives the 'first voltage'" [sic] [answer-page 3].

An examiner's charge of "inherency" may be challenged by an appellant and, indeed, appellant in this case has challenged the examiner to show that elements receiving a higher voltage must operate above a maximum propagation delay. At pages 6-7 of the principal brief, appellant contends that this is not inherent, pointing out that "alternatives do exist" since the application of a lower voltage to a device operating between 5 volts and ground does not necessarily indicate that it will have a longer propagation delay than a similar device which operates between 3.4 volts and ground.

We agree with appellant that there is simply no teaching in Gregor that the signal paths which are operated at the higher voltage do not operate below a maximum propagation delay required to maintain the operating frequency of the component when operated at the lower voltage. The examiner's response is to state [answer-page 4] that "all that would be required is for the reference to have one scenario (i.e., one arbitrary 'maximum propagation delay') wherein the

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corresponding portions of the circuit meet the recited limitations [emphasis in the original]." While we might agree, the examiner has not pointed to any such one scenario in Gregor wherein the claimed subject matter is anticipated. In any event, the examiner has alleged "inherency" and inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient to establish "inherency." Hansgird v. Kemmer, 102 F.2d 212, 214, 40 USPQ 665, 667 (CCPA 1939).

We further agree with appellant [principal brief-page 8] that the "maximum propagation delay" in accordance with the invention "is the propagation delay required to maintain the operating frequency of the component...Gregor does not teach or suggest that the devices 19 and 20, or the devices 22 and 23 are in a critical path such that the operating frequency of the components including these devices is affected by the propagation delay through these devices."

Thus, it appears to us that the examiner's premise of anticipation rests on speculation and speculation is not a proper basis for a finding of anticipation. Accordingly, we

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will not sustain the rejection of claims 4, 7 through 9, 12 and 13 under 35 U.S.C. § 102(b).

Similarly, since the rejection of claims 5, 6, 10 and 11 under 35 U.S.C. § 103 is based on the same speculation as to Gregor's suggestion of the claimed "maximum propagation delay," we also will not sustain the obviousness rejection.

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The examiner's decision is reversed.

REVERSED

	Kenneth W. Hairston)	
	Administrative Patent Judge)	
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	Errol A. Krass)	BOARD OF
PATENT	Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
	Joseph L. Dixon)	
	Administrative Patent Judge)	

tdl

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BLAKELY SOKOLOFF TAYLOR and ZAFMAN
12400 Wilshire Blvd.
Seventh Floor
Los Angeles, CA 90025